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Idaho National Engineering & Environmental Laboratory

PROJECT DOCUMENT REVIEW RECORD

DOCUMENT TITLE/DESCRIPTION: Comprehensive Remedial Design/Remedial Action Work Plan for the Test Area North, Waste Area Group 1, Operable Unit1-10, Group 2 Sites (90%)

DATE: August 30, 2001 **REVIEWER:** IDEQ (Final Resolutions – 9-18-01)

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
GENERAL COMMENTS				
1			The document lacks specificity with respect to waste characterization and some waste management requirements. For example, the text commonly indicates that wastes will be characterized to meet the TSDF's WAC, but does not provide any detail. The work plan should include the required analyses and analytical methods, estimated number of samples per anticipated waste stream, and sample collection methods to ensure the resulting waste profile is representative. Similarly, the text contains statements that some of the wastes may be treated (solidified) to meet a WAC, but provides no criteria to make this determination, or procedures that that will be followed to conduct the treatment. These specifications should be included in the finalized RD/RA Work Plan	These specifics will be included in appropriate field sampling plans. The design has been based primarily upon the Envirocare WAC, although the ICDF will be the disposal location for much of the waste. The ICDF WAC will not be final by the time this Work Plan is finalized. Two field sampling plans will be revised after the finalization of the RD/RA Work Plan and associated documents to address waste characterization. These field sampling plans will address the following data needs: • Excavated soil waste characterization • Further characterization to determine the areal extent of radiological soil contamination • Confirm radionuclide distributions in sludge HICs • Ensure sludge drums, once filled, meet DOT, cask, and TSDF requirements • Verify that V-Tanks liquid meets land disposal restrictions and WAC FSP (DOE/ID-10876) will be revised to address the first two bullets above, and FSP (DOE/ID-10794) will be revised to address the last three bullets above.
2			It is our understanding that the Waste Management Plan will be submitted for Agency review on August 30, 2001 with comments due back to the USDOE on September 21, 2001. The RD/RA Work Plan should specify that the waste Management Plan will then be incorporated into the draft final and final RD/RA Work plan.	The Waste Management Plan (WMP) was submitted for Agency review on August 30, 2001 as planned. Comments from the agency are due September 21, 2001. The WMP is a stand-alone document and is referenced in Section 6.6 of the RD/RA work plan as a supporting document to the RD/RA work plan. Agency comments will be incorporated into the WMP and submitted to the agencies with the draft final version of the RD/RA work plan on October 16, 2001.

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3			Comments were not prepared for Appendix F, "Remedial Action Cost Estimate", as costs analysis and discussion are currently in progress amongst the agencies.	Comment noted. The Appendix F cost estimate will be updated based on the latest information prior to draft final submittal.
SPECIFIC COMMENTS				
4	Table of Contents	Pages v through vii	Please add the Confirmation Field Sampling Plan and the Decontamination Plan to the List of Appendices. Also, change Appendix C to "Design Calculations" and add Appendix D, "Air Emissions Modeling and Data Output".	Based on earlier scoping meetings with the agencies and past work plans, these are separate, stand alone documents and will not be included in the appendices. They are discussed in Section 6.6. The error associated with Appendices C & D will be corrected.
5	Section 1.1	Pages 1-2 through 1-3	Please add the Confirmation Field Sampling Plan and the Decontamination Plan to the list of bullets. In addition, a bullet for the Waste Management Plan, although not included in this submittal, should be included in subsequent versions.	Section 1.1 describes the organization of the RD/RA WP. As supporting documents, these are discussed in Section 6.6. and will not be discussed in this section.
6	Section 1.2.2	Page 1-3,	The third sentence contains the first mention of the area of contamination (AOC). Please reference Figure 1-4 as the first figure showing the AOC.	Figure 1-4 will be referenced.
7	Section 1.2.2.4	Page 1-11	Please add "*of the Intermediate-level waste disposal system*" after "*components.*" This distinction is important because it identifies the link to the VCO-driven closure activities.	Suggested text will be added
8	Section 2.1	Page 2-1	Change sentence to read "Prevent release of V-Tank contents to the environment".	This was the way it was presented in the ROD and will not be changed.

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9	Section 3.4	Page 3-3	Please report the status of obtaining a "project specific variance", referred to here for storage of the V-tanks sludge off-site. This has not been discussed in detail with the agencies prior to the issuance of this document, but if a possibility, would alter the remedial action positively in terms of scheduling and associated costs. If the variance is not being pursued, then the reference to it should be deleted prior to the Workplan finalization in November	The possibility for a project-specific variance at ATG which would permit treatment and storage of all the V-Tank sludge at the Treatment, Storage, and Disposal Facility at one time has been mentioned with the agencies on weekly conference calls but has not been discussed in detail. The variance cannot be pursued until final agency approval of the RD/RA work plan and Waste Management Plan has been obtained. At that time a formalized Scope of Work (SOW) will be prepared which will include requesting the Treatment, Storage, and Disposal Facility to seek such a variance. No change will be made to the RD/RA WP.
10	Section 3.5,	Page 3-3	Please specify what the site preparation activities referred to here are. There do not appear to be references to these activities elsewhere in the RD/RA Work Plan.	If early site preparations are performed, these will be identified in weekly teleconferences.
11	Section 4-1	Page 4-1	The meaning of this assumption is not clear. Is the Envirocare WAC an industry standard and/or conservative, so that it is assumed any other TSDF WAC for radionuclide-contaminated water disposal should be similar? Please explain	This basis for this assumption is that the Envirocare WAC is typical for other radionuclide-contaminated water TSDFs. This assumption was used in the event that ICDF cannot receive this waste, it can be sent to Envirocare.
12	Section 5.1, Table 5-1	Page 5-4	Line Item 40 CFR 268.40 (a), (b), and (e), Compliance Strategy, The previous sampling for soils may not be representative of contamination in subsurface soils if there were leaks in the tank system components. Therefore, the indicated comparison to the preliminary HWD will be critical to identify the need to collect additional samples for waste characterization purposes. Please specify, in this document, how this comparison will be conducted to ensure that the waste profile is representative.	Excavated soils will be characterized to meet Envirocare WAC criteria. Excavation floor soils will be characterized to achieve closure goals. In both cases, characterization will include analyzing for RCRA hazard constituents. (Refer to General Comment 1)

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13	Section 5.1, Table 5.1	Page 5-4	Line Item 40 CFR 268.45 (a)(b)(c)(d), Compliance Strategy, The discussion identifies these as "alternative" treatment standards. Alternative treatment standards are identified in 268.49, not 268.45.	40 CFR 268.45 provides alternative LDR standards for Debris. 40 CFR 268.49 provides alternative LDR standards for soil. The reference for debris is correct.
14a	Section 5-1, Table 5-1	Page 5-4	The IDAPA citations do not reflect the change from 16.01. to 58.01.	In the ROD we identified ARARs, including state regulations that implement RCRA and other regulatory programs. These regulations are specified under the numbering system then in effect: IDAPA 16.01..... The ARARs were frozen at the time of ROD signature. The DEQ comment #14 requests that we restate the existing ARARs in the RD/RA Work Plan as IDAPA 58.01.... Adopting this comment may be harmless, assuming there have been no changes in state regs since the ROD was signed. Simply restating ARARs in the Work Plan does not change the ARARs in the ROD. However, it does provide room for misunderstanding and potential disagreement if the regs have changed and someone finds the change. For clarification, the RD/RA Work Plan (and the ESD) will have clarification text as a footnote to Table 5-1 added that states that the original ROD ARARs will continue to be cited, and will remain in effect, as 16.01.... but the numbering system has been changed to 58.01....
14b	Section 5-1, Table 5-1	Page 5-4	40 CFR 264.554 – Staging Piles, is not identified. Staging piles (for contaminated soils) may be utilized during this remediation and should be addressed.	There are no plans to use staging piles in this remedial action.

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14c	App. A,		Newly Identified ARARs for the OU 1-10 V-Tank Remediation, from the recent OU 1-10 ESD (August 2001) include PCB Waste and Miscellaneous Units ARARs that are not found in Table 5-1 and will need to be incorporated. Please indicate the timing for this.	Please reference Table 5-2 in the RD/RA Work Plan.
14d			Equipment Decontamination, 40 CFR 264.114 has been identified as an ARAR. 40 CFR 264.112 (b) (4) also deals with equipment decontamination and should be considered.	Equipment decontamination ARARs have been identified in the ROD.
15	Table 6-1	Page 6-2	Under the V-Tanks Remedial Action the planned completion date for "Complete Tank Contents Waste Transportation, Treatment, and Disposal" is shown as 9/30/2002. It should be 9/30/2004, as shown in Line 720 of Figure 6-1.	This will be corrected.
16	Section 6.2.2.2,	Page 6-7,	Please describe the "internal de-watering system" in the proposed sludge containers (assumed here to mean drums), and how it will function within the indicated radioactivity limits. The discussion provided is not clear. If this treatment method is described in detail in another part of the RD/RA Work Plan, please indicate where the additional information can be found.	The proposed sludge containers are 55-gallon drums. The "internal dewatering system" consists of six particulate filters as shown on drawing 12 of 19 in Appendix A. The "internal dewatering system" is used to dewater the sludge by taking suction on the drum through the filters. The dewatering process is not related to the radioactivity content of the drum. The purpose of the filters is to prevent the radioactive solids from being removed from the drum by the dewatering pump. This paragraph will be rewritten to clarify what will be done.

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16b	Section 6.2.2.2	Page 6-7	Please describe the process treatment for liquid wastes (i.e., filtering system using granular-activated carbon and oil filters) in more detail in terms of the LDR limits.	The process treatment drawings for treating liquid waste are shown on drawings 10, 11, and 12 of 19 in Appendix A. These drawings address the initial separation of sludge/water, treatment of water removed during drum dewatering, and backup water treatment if the initial treatment processes do not adequately remove contaminants to acceptable LDRs. The filters in the sludge HIC and a train of process filters will filter all water initially removed from the V Tanks. There are two parallel filtration trains. Each train will initially consist of an oil filter, two granular activated carbon (GAC) filters, and a 1-micron filter. The particulate filters will remove suspended radioactivity (not an LDR issue) and heavy metal contaminants. The oil filter will absorb concentrated hydrocarbons that could clog the GAC filters. The GAC will adsorb organic contaminants that exceed the LDRs (see calculation ABQ12-CE008). If the initial water processing fails to meet LDR standards for organics, the backup water treatment system will be implemented. The back up system can also include an ion exchange filter for mercury, if required to meet the LDRs. No changes will be made to this paragraph.
17a	Section 6.2.2.3,	Page 6-7	In the first paragraph, please add to the following sentence: "Areas of failed tank or piping integrity will be identified and documented for soil sampling purposes.	Suggested sentence will be added.
17b	Section 6.2.2.3	Page 6-7	More specificity is needed regarding waste characterization. The following items should be presented: the required analyses and analytical methods, estimated number of samples per anticipated waste stream, and sample collection methods to ensure the resulting waste profile is representative.	See General Comment 1 response
17c	Section 6.2.2.3	Page 6-7	The text in this section should identify where the reader can find the Confirmation Field Sampling Plan.	The Confirmation Field Sampling Plan is one of the supporting documents.

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18	Section 6.2.2.4,	Page 6-7 through 6-8	Third sentence: Please identify a figure that indicates the location of the Drum Storage/Water Storage/Decontamination Area. Fourth Sentence: Please define what is meant by "accumulated water," and why this water is anticipated. Last Sentence: The text should identify where the reader can find the Decontamination Plan.	The appropriate drawing (Drawing 5 of 19 in Appendix A) will be identified. Accumulated water in this section refers to decontamination water and/or onsite storm water that is accumulated within the berm of the Drum Storage/Water Storage/Decontamination Area. This definition will be added to the text. Decontamination Plan is one of the supporting documents.
19	Section 6.2.2.6	Page 6-8,	More specificity is needed regarding waste characterization. See comment 17(b).	See General Comment 1 response
20	Section 6.3.2	Pages 6-8 though 6-9	This section lacks required specificity regarding waste characterization, presumably because the disposal facility has not been chosen. See General Comment 1	See General Comment 1 response
21	Section 6.3.2	Page 6-9,	Last Sentence in Section This sentence is vague with respect to management requirements. Please identify possible characterization outcomes and corresponding management options.	A statement referencing the Waste Management Plan will be added. See General Comment 1 response.
22	Section 6.3.3	Page 6-9	The text in this section should identify where the reader can find the Confirmation Field Sampling Plan, and should qualify what is meant by a "future" revision. This document is scheduled to go final in November, 2001.	The Confirmation Field Sampling Plan is one of the supporting documents. See General Comment 1 response.

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23a	Section 6.4, Table 6-2,	Pages 6-10 through 6-12	"Liquids" line item: The table requires clarification. Free liquids can not be land-disposed. Please modify the table to indicate that the liquids must be solidified prior to land disposal.	The table will be modified with a footnote to indicate that the liquids must be solidified prior to land disposal.
23b			Planned Disposal Facility: Prior to implementing this action, the disposal facility must be chosen, and this document updated as needed to include specific requirements that the OU 1-10 project must meet to utilize the disposal facility.	The utilization and ultimate selection of the Planned Disposal Facility listed in Table 6-2, (which through footnote 2 to the table refers to the Waste Management Plan), will be based on waste evaluation and confirmation process that will be conducted during the implementation phase to ensure that the waste will meet the TSDF facility's current revision of their Waste Acceptance Criteria. The RD/RA WP and associated documents is not planned to be updated based on planned TSDF decisions.
24	Section 6.6	Page 6-14 through 6-16	Each of the subsections should identify where the reader can find the identified documents (e.g., Appendix C).	Supporting documents are separate documents and not appendices.
25	App A, Design Drawings	Sheet 4 of 19, (Grading and Surface Demolition Plan)	The call out for the "New V Ditch" references detail 1/4/4. It appears from inspection of the details on this sheet that this reference should be to detail 2/4/4. Please clarify.	Reference to detail 2/4/4 is correct. Drawing will be corrected.
26	App A, Design Drawings,	Sheet 8 of 19, (V-1, V-2, V-3,& V-9 Tank Removal Plan)	The limits of the trench shielding around the V-9 Tank and Valve Pit are not shown on sheet 8, but they are shown on detail B/7,8/9 on Sheet 9. Please add the limits of the trench shielding for the V-9 tank and the Valve Pit to sheet 8	Limits of shielding will be added to the drawing.

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27	App A, Design Drawings	Sheet 10 of 19, (V-1 Tank Sludge Content Removal Process and Instrumentation Diagram (P & ID))	The symbol used for the check valve from the air tank indicates that flow is toward the air tank. This appears to be incorrect, and should be changed to reflect that the flow direction is out of the air tank	The check valve symbol will be changed.
28	App A, Design Drawings	Sheet 19 of 19, Detail A (Containment Berm/ Ramp Detail)	The material for the berm is called out as "6" Compacted Earth". It is uncertain as to what the 6 inch descriptor implies since the berm has a wedge shape. Please clarify.	Reference to 6" is incorrect and will be deleted so the note will only indicate "Compacted Earth".
29	App B Section 01100 Special Project Procedures, Section		We suggest that copies of the weekly progress reports be forwarded to the IDEQ and USEPA WAG managers, so that they may be informed of the remedial action progress. This is currently being done for the OU 3-13 Group 3 ICDF project.	Remedial Action status will be provided to the Agencies in periodic conference calls.
30	App B, Design Specifications, Section 01500,	Page B-10	Paragraph 3.2.E.1.d, first sentence This sentence currently states "Hospital/emergency haul route map". It is unclear why there is a need for an emergency "haul" route. Please clarify.	The word "haul" will be removed.

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31	App B, Design Specifications, Section 02050	Page B-15	Paragraph 3.6.A.1, first sentence This sentence currently states "...make arrangement for three 6 in. valves located in the Pump Room of Building TAN-616 to be opened." Please specify exactly which three 6 in. valves are to be opened.	These 6 in. valves are the only 6 in valves in the pump room, so there will not be any confusion which valves need to be opened. No changes to the specification will be made.
32	App B, Section 02115: Underground Storage Tank Removal		Section 3.2, Item (E) (3) (f) Please identify where the reader may find the drawings for interim storage, which show the soil storage area. We were unable to find these in Appendix A.	Reference to "Soil Storage Area" will be changed to "Soil Bag/Debris/Tank Storage Area" so there will be direct correlation with the callout on the drawings which is on sheet 5 of 19.
33	App B, Design Specifications, Section 02700,	Page B-30	Paragraph 1.7.A.3 This paragraph allows the use of runoff water from contaminated areas for dust control of contaminated areas. This practice could likely result in the unnecessary contamination of equipment, such as water trucks, and should not be considered. In addition, spraying contaminated water over the ground surface could cause airborne release of radioactive constituents.	Runoff water will not be used for dust control. This will be deleted from the spec.
34	App B Design Specifications, Section 02920		Page B-40, Paragraph 3.4.E, last sentence Please add the following verbiage to the end of this sentence: "...prior to application."	Suggested verbiage will be added.

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35	App B, Section 13204: Water Treatment System and Dewatering, Section 3, Item (B)		Sludge Transfer from HIC to Drum, last sentence Please clarify whether it is the intent to maintain a negative pressure gradient within the concrete shielding block shown on drawing 16B of 19.	The intent is to maintain HEPA exhaust ventilation within the concrete shielding enclosure.
36a	App. B Section 13204: Water Treatment System and De-watering, Section 3, Item (B)		De-watering Process of 55 gallon Drums, Second Paragraph Please provide more detail regarding the drum solidification process. It is unclear how the solidification agent will be circulated within the drum, and how the effectiveness of the solidification process will be verified.	The solidification agent is only being added to the drums as a conservative measure to take care of any water that may continue to drain over time as the drums sit in interim storage. The agent will not be mixed/circulated within the drums and will only be placed in the open areas of the outlet and inlet where any water that does continue to drain will collect. No verification of the effectiveness of the solidification agent is intended since the drums will be dewatered to less than 1% by volume via the dewatering process that will be developed. No changes to the specification will be made.
36b			Additionally, the RD/RA Work Plan should include an evaluation to determine that the proposed solidification agent is compatible with the anticipated contaminants in the sludge.	The manufacturer will be contacted to determine compatibility with anticipated contaminants.
36c			The process execution plan should be part of the remedial action work plan.	The process execution plan, a procedure level document, will be developed, tested and proven during the mock up that will be conducted in the STAR center. Procedure level documents are typically not intended for review by the Agencies. The title of this document will be changed to the process execution procedure.

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37	App. B, Subsection ABQ04		Required treatment of liquid-phase tank waste in order to ensure compliance with the Waste Acceptance Criteria for Disposal at Envirocare of Utah The purpose of this subsection is unclear since it is evident in this document that the disposal location has not yet been selected. Please discuss the uncertainty regarding the disposal location, and indicate how the RD/RA work plan will be updated to incorporate requirements for the selected disposal location.	This basis for this assumption is that the Envirocare WAC is typical for other radionuclide-contaminated water TSDFs. This assumption was used in the event that ICDF cannot receive this waste, it can be sent to Envirocare. The RD/RA WP and associated documents is not planned to be updated based on planned TSDF decisions.
38	App. C, Design Calculations, Calculation Number ABQ01-HP001	Page 3 of 48, Table 1	For tank V-3, at 652 gallons of sludge in the tank, and using 25 gallons of sludge per drum, the required number of drums is 26, not the value of 29 drums listed. Please clarify if there are other variables involved in these calculations.	The reason additional drums were indicated for V-3 is the fractions in V-1 and V-2 have been added to the number of drums for V-3. This table in calculation ABQ01 will be modified so that the number of drums required for V-1 and V-2 is rounded up, and the fractions will not be added to V-3. The total number of drums will not change.
39	App. C, Design Calculations, Calculation Number ABQ03-HP003, ABQ04-HP004-RAB, ABQ05-CE001, andABQ13-HP005		These four calculations are listed as calculated and checked, but not approved. Please have these calculations approved, and so documented.	Approval signature will be included in the Draft Final revision of the RD/RA Work Plan.

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40	App. C, Design Calculations, Calculation Number ABQ05-CE001		This calculation is listed as calculated and checked by the same individual. Please have this calculation checked by a person other than the originator, as it is accepted engineering practice that calculations are checked and/or approved by other than the originator.	Calculation has been checked by a person other than the originator and will be indicated on the cover sheet.
41	App. D, Air Emissions Modeling and Data Output		The modeling and discussion in Appendix D indicate that the V-tanks remedial action will not result in an exceedance of either the NESHAPS radionuclide or the IDAPA air toxics requirements. The modeled results are well below the regulatory limits for the off-site recipient. However, a second administrative standard should be included in Table D-4. The EPA and DEQ have adopted a policy that each individual source of radionuclide emissions on the INEEL site can not contribute more than 0.1 millirem/year. The policy was adopted to ensure compliance with the site-wide NESHAP standard. The model results indicate that this action would also meet this more stringent standard.	Comment withdrawn by IDEQ in Boise meeting September 18, 2001.
42	App. I, Section 1	Page 1	The text should clarify whether the 2000 gasket installation appears to be effective in controlling volume increases, based on level measurements.	Comment acknowledged. It is difficult to definitively determine whether the year 2000 gasket installation was effective. The liquid level measurements in Tank V-3 have not shown significant increase during 2001, as has been seen in previous years. However, as discussed with the Agencies, recent question on the liquid level system is leading to sticking the tanks to get more accurate data. No text will be changed because of the uncertainty.

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43	Field Sampling Plan, Section 2.2.2,		Third Bullet The previous sampling for soils may not be representative of contamination in subsurface soils if there were leaks in the tank system components. Therefore, the assumption that the soils do not contain TCLP metals at levels regulated under RCRA, could be incorrect. The field sampling plan should have the provision to sample soils for TCLP if field screening instruments for radionuclides and/or VOCs suggests that there have been releases from the tank system.	See General Comment 1 response.
44a	Field Sampling Plan, Section 3-1, Table 3-1,	Page 3-2, Decision Statement #2	SVOCs, being less volatile and hence less detectable, are also more persistent in the shallow subsurface environment than are VOCs. Therefore, we suggest that the radiological activity also be used as an indicator of releases, which would trigger the need to sample for hazardous contaminants (VOC, SVOCs, metals, and PCBs.)	It is agreed that radiological activity would be an indicator of releases. Decision Statement 1 discusses radiological screening.
44b	Field Sampling Plan, Section 3-1, Table 3-1,		In reference to "demonstrate that risk-based hazardous constituent concentrations have been achieved.", please provide a discussion to demonstrate the methodology that represents 23.3 pCi/g Cs-137.	Comment withdrawn by IDEQ in Boise meeting September 17, 2001. As discussed, the confirmation sampling process is to collect both judgement and grid samples. All collected samples will be subjected to laboratory analysis for those analytes indicated in the FSP (rad, metals, organics, PCBs). Total risk of all analytes will be evaluated to determine whether the excavation meets FRGs.
45	Field Sampling Plan, Section 3-1, Table 3-1,	Page 3-2, Decision Statement #3	We suggest that PCBs be added to the list of analytes for excavations in the vicinity of tanks V-2 and V-9.	List will be revised to reflect this.

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ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
46a	Field Sampling Plan, Section 3-1, Table 3-1	Page 3-2, Decision Statement #4	Alternative 1: Use of historic soil sample results for waste profiling must be used with caution. The previous sampling for soils may not be representative of contamination in subsurface soils if there were leaks in the tank system components. If observations (e.g., radiological activity) suggest that leakage has occurred, new soil samples should be collected to develop a more representative waste profile.	Decision Statement #4 applies only to secondary waste. The characterization of secondary waste would depend upon the characterization of the waste the secondary waste came in contact with. For example, historical soil samples may be used to profile PPE that came in contact with surficial soil, but would not be used for PPE that comes in contact with tank contents. Characterization of secondary waste could also be based upon process knowledge or samples. See General Comment #1.
46b			The table should be footnoted to define "secondary wastes."	Comment will be incorporated
47			Field Sampling Plan, Section 6.2, Page 6-3 This section indicates that wastes will be managed in accordance with several MCP's. Please provide copies of all referenced MCP's for our review.	MCPs are BBWI's internal procedures and normally not provided for external review. The MCPs can be provided for information upon request.
48	Decontamination Plan, Section 1,	Page 1	Fourth Paragraph This paragraph identifies several remediation procedures that are not covered in the decontamination plan. Please specify where decontamination associated with those activities is addressed.	The identified items are not intended to be decontaminated. The text will be revised to explain this.

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PROJECT DOCUMENT REVIEW RECORD

DOCUMENT TITLE/DESCRIPTION: Comprehensive Remedial Design/Remedial Action Work Plan for the Test Area North, Waste Area Group 1, Operable Unit1-10, Group 2 Sites (90%)

DATE: August 30, 2001 **REVIEWER:** IDEQ (Final Resolutions – 9-18-01)

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
49	Decontamination Plan, Section 2.4,	Page 6	First Paragraph under Section Heading, Fourth Sentence The previous sampling for soils may not be representative of contamination in subsurface soils if there were leaks in the tank system components. If observations (e.g., radiological activity) suggest that leakage has occurred, new soil samples that include PCBs should be collected to develop a waste profile. Likewise, removal of tank liquids may re-suspend the fine tank sludges, where the highest concentrations of PCBs are found, and increase the concentration of PCBs in the supernatant. These liquids should therefore be re-characterized after they have been removed from the tanks if there has been obvious sludge disturbance and resuspension before withdrawal of the supernatant. Decontamination techniques for equipment would depend on the new analytical results, and where in the remedial action process the direct contact occurred (e.g., after the liquids have been removed from tank and treated).	Characterization after pumping will be performed. See General Comment #1.
50	Decontamination Plan, Section 2.8,	Page 9	Fourth and Fifth Bullets Please identify and provide the referenced MCPs for our review	MCPs are BBWI's internal procedures and normally not provided for external review. The MCPs can be provided for information upon request.
51	Decontamination Plan, Section 3.2.1,	Page 11	Please provide copies of all referenced MCP's for our review.	MCPs are BBWI's internal procedures and normally not provided for external review. The MCPs can be provided for information upon request.

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DATE: August 30, 2001 **REVIEWER:** IDEQ (Final Resolutions – 9-18-01)

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
52a	Decontamination Plan,	Page 11	Third Sentence: Waste extraction procedures could cross-contaminate tank wastes (see comment 50), or suspend fine sludges back into the liquid phase. Likewise, the previous sampling for soils may not be representative of contamination in subsurface soils if there were leaks in the tank system components. Therefore, we recommend that representative new samples are collected for waste profiling purposes.	Characterization after pumping will be performed. See General Comment #1.
52b	Decontamination Plan,	Page 11	Fourth Sentence: Please provide a copy of the referenced MCP for our review.	MCPs are BBWI's internal procedures and normally not provided for external review. The MCPs can be provided for information upon request.
53	Decontamination Plan, Section 3.2.3,	Page 11	Please provide a copy of the referenced MCP for our review.	MCPs are BBWI's internal procedures and normally not provided for external review. The MCPs can be provided for information upon request.

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PROJECT DOCUMENT REVIEW RECORD

DOCUMENT TITLE/DESCRIPTION: *OU 1-10 V-Tank Waste Management Plan*

DATE: 25 Sept. 01 **REVIEWER:** EPA

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
GENERAL COMMENTS				
1			Issue of "offsite" vs "onsite". Note that from EPA's perspective RWMC, CFA, etc. are considered to be offsite in regards to waste disposal. Shipping CERCLA waste to these sites will require a suitability determination. It is acceptable to send CERCLA waste to the ICDF . For additional clarification as to on site, the AOC needs to be clearly defined in the RD/RA work plan; see 40 CFR Sec. 300.440 Procedures for planning and implementing off-site response actions: (a) Applicability. (1) This section applies to any remedial or removal action involving the off-site transfer of any hazardous substance, pollutant, or contaminant as defined under CERCLA sections 101 (14) and (33) (``CERCLA waste") that is conducted by EPA, States, private parties, or other Federal agencies, that is Fund-financed and/or is taken pursuant to any CERCLA authority, including cleanups at Federal facilities under section 120 of CERCLA, and cleanups under section 311 of the Clean Water Act (except for cleanup of petroleum exempt under CERCLA). Applicability extends to those actions taken jointly under CERCLA and another authority. and 58 FR preamble to final rule, pages 49200 & 49204 (Sept. 22, 1993).	The CERCLA site for waste management purposes, as defined in the Federal Facility Agreement and Consent Order, is the entire INEEL site area. The CERCLA site includes waste management and disposal areas such as the INEEL CERCLA Disposal Facility Complex, the Central Facilities Area Industrial Landfill, the Radioactive Waste Management Area, Argonne National Laboratory-West, and interim storage at Test Area North. Waste generated during remediation activities and stored in a temporary accumulation area within the AOC will be moved to one or more of the waste management areas within the INEEL site or sent offisite for storage, treatment, or disposal. Hazardous waste generated during remediation activities that leaves the AOC will be required to meet Land Disposal Restriction (LDR) standards prior to disposal either on-site or off-site. The information in the above paragraph will be incorporated into sections 4.3 and 5.0 of the WMP and will also be included in appropriate sections of the RD/RA work plan.

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DATE: 25 Sept. 01 **REVIEWER:** EPA

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
SPECIFIC COMMENTS				
2	Table 2.1.2	P. 5	The Tank V-9 historical background does not mention the significant issue of fissile material content (i.e., U-235). The sand filter's gross alpha and gross beta values need the exponents to be properly noted/depicted.	Because of the high concentration of fissile materials in the tank, a criticality evaluation was conducted in 1998. The evaluation recommended that additional sampling be conducted to adequately assess criticality issues. Eight samples were collected from TAN V-9 in April 2001; three of those samples were collected from behind the baffle. The data evaluation resulting from that sampling effort is contained in Appendix G of the RD/RA Work Plan. This text will be added to Table 2.1.2 under Tank V-9. The exponents will be corrected to 10^{-4} and 10^{-5}.
3	Sect. 4.3.2.	P. 16	This text discusses where containers of waste may be sent. It states that waste maybe transported to " . . . RWMC or . . off-site TSDF." It is EPA position that RWMC is off site for the purpose of disposal of CERCLA waste.	Please see the response to comment 1. The waste management plan will be revised to note that waste will be sent to "an appropriate TSDF."
4	Section 4.3.5.2, #2	P. 19	What is the basis for expecting the water to "show <50 ppm PCBs"? Would it be accurate just to state that MLLW water not regulated under the PCB regulations will be placed in separate containers?	Pursuant to the Work Plan, water will be treated to meet the LDRs and WAC for the appropriate disposal option. This paragraph will be revised to reflect that the second waste stream leaving this area will be water that has been treated to meet the LDRs and WAC for the appropriate disposal options.
5	Sect. 4.3.5.4, last parg.	P. 22	Is it correct, as it states in this paragraph, that one can manage RCRA and TSCA regulated waste components as MLLW if they have a radionuclide content?	The paragraph will be re-worded to clarify that waste will be treated as MLLW with PCBs > 50ppm.

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ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
6	Section 5	P. 26	This section needs to provide a good discussion explaining the difference between On Site and Off Site from a regulatory perspective.	Please see response to comment 1.
7	App. B, Sect 2.3	P. 5 of 10	This states that the sludge storage facility will have concrete blocks placed around the perimeter. Given that the drums will be inside lead casks is this still necessary?	Yes. The concrete blocks provide additional protection for areas requiring maintenance. In addition, the blocks are necessary to meet ALARA goals and prevent access to the drums themselves.
8	App. B, Sect. 3.2.1.1.	P. 7 of 10	This section notes that an individual worker should not be exposed to more than 700mrem in a year. The field inside the storage area will be 26 mr/yr (Fig. 1 Apdx C). Does this result any special arrangements necessary to insure worker protection?	Additional worker protection will not be necessary. Worker protection is covered in existing radiological controls. The documents show that the filed inside the storage area will be **2.6** mr/yr.
9	App. B,	Sheet DWG-518070	This figure indicates that the drums of sludge will be placed on two adjacent rows of pallets. Does this configuration provide enough of a view of the drums on the outer row for adequate inspection?	Placement of drums will allow adequate inspections. The drums will be placed so that all drums can be viewed.
10	App. C, Sect. C.2.2, 3rd parg.	Page C-6	The text in the middle portion of the paragraph indicates that the effects of shielding by the lead lined drums on the inner row was neglected in the calculation of exposure rates. However, the last sentence indicates that the results presented in Table 6 represents exposure from only the closest row of drums. Would adding the effects of the outer row of drums significantly increase the calculated exposure?	Preliminary calculations showed that the radiation from the drum rows that are completely shielded by another drum row – with respect to the exposure point of interest – *does not contribute appreciably* to the exposure rate at the selected point; therefore, the effects of these rows were neglected.

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11	Acronyms	P. ix	add WGS	Noted and accepted. The acronym will be added.
12	1st parg., 2nd sentence.	P. 15	This sentence implies that if the water does meet the WAC the water will not be stabilized prior to disposal. True?	The paragraph will be clarified to note that all liquid waste meeting LDRs and the relevant WAC will be stabilized and sent to an appropriate disposal facility.
13	Section 4.3.5.1, last parg	P. 17	The two sentences appear to be redundant. Recommend removing the first sentence.	Noted and accepted. The last sentence of the paragraph will be deleted.
14	Table 5, 3rd parg.	P.15	Is "mazzlin" a typo?	It is not. "Mazzlin" is a trade name for large yellow swipes. But the sentence has been revised to delete the reference to mazzlin.

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DOCUMENT TITLE/DESCRIPTION: *OU 1-10 V-Tank Waste Management Plan*

DATE: 25 Sept. 01 **REVIEWER:** IDEQ

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
GENERAL COMMENTS				
1			The supernatant liquids found in V-Tanks 1 through 3, and their fate, appear to be unaccounted for in this document, starting with waste identification through to waste management at the various sites (storage, staging, filling and decontamination areas) outside the AOC. Several of the "Specific Comments" below will discuss this omission.	The supernatant is identified with the liquid and accounted for in Table 4. Supernatant will be drawn from the V-3 tank and used in the AOC for slurry. The liquid will then be treated to meet LDRs and disposed in the ICDF landfill.
SPECIFIC COMMENTS				
2	Section 1.0	page 1, third paragraph	This discussion of the Group 2 components of the Intermediate-Level Waste Disposal System appears to omit the TAN-1704 Valve Box. Please add this to the discussion. Also, based on the discussion in this section and those in later sections, and the fact that this is supposed to be a stand-alone document, it seems a figure showing all the Group 2 components relative to the AOC would be appropriate.	The TAN-1704 Valve Box will be managed by the VCO Program. Removal of the Valve Box will facilitate V-9 tank remediation; once the Valve Box and its contents are removed all materials will be turned over to the VCO program. A paragraph explaining the Valve Box and its history will be added with this explanation. Figure 2 shows all the relevant components of the remedial action.
3	Section 2.1	page 2, first paragraph	Please provide a reference to a figure showing the location of TAN-607. This building is first referred to here, and is referred to later in the document, all without reference to a figure showing the location.	Figure 1 specifically shows the locations of TSF-09 and TSF-18. For a more detailed drawing of the entire area, please see drawing 518069 (Appendix B).
4	Section 2.1.1	page 3, first paragraph	The reference to the "Pipe Removal Plan (drawing 7 of 19)" in the RD/RA WP, should include a reference to "Appendix A, Design Drawings", where this sheet is found	The change will be incorporated into the Draft Final.

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5	Table 1	second bullet of "Sand Filter"	"Cs-132" should be changed to Cs-137.	The change will be incorporated into the Draft Final.
6	Section 3.1 and Table 3,	pp. 6 and 7	The intent and meaning of this section (Currently Managed Wastes), and associated table, are not clear. For example, the association of this WMP with TSF-26 soils, the TSF-21 vault, and "OU 1-10 TSF-18 Remedial Action waste" (the 445 gallons cited here is more than the known capacity of the V-9 tank) is uncertain. Please explain further.	Most of the currently managed wastes were generated as investigation wastes (e.g. PPE, debris, altered and unaltered samples, etc.) associated with characterization of the V-tank contents and surrounding soil. Some of the currently mangaged waste was generated from other removal activities (TSF-21 vault) that were part of the V-tank system but not covered in a Waste Management Plan document. The 445 gallons of waste referred to in the comment is PPE and other debris generated from sampling activities associated with the V-9 tank.
7	Table 4,	pages 8-12	To help verify estimated volumes of the sand filter box and TAN-1704 valve box, please provide wall thicknesses.	Dimensions for the TAN-1704 Valve Box will be provided. The dimensions can also be found in the RD/RA work plan. The Sand filter box has outer dimensions of 5' wide by 3' deep by 3' high. The concrete walls are 4" to 6" thick. The internal dimensions of the TAN-1704 valve pit are 5' by 5.3' by 9.5' deep.

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8	Section 4.2,	page 15, first paragraph	This description of the fate of the liquids as a result of sludge dewatering appears to contradict a similar discussion found in "Footnote b" of Table 4. The footnote, first associated in the table with the V-9 liquid waste, states that the liquid waste will be treated and "then solidified to meet the Envirocare waste acceptance criteria (WAC)". This discussion (Section 4.2) seems to imply that the liquids will be solidified only if they do not meet, as a liquid, the TSDF WAC. Please specify disposal options and the treatment that would be required for each of those options.	The paragraph will be clarified to include an explanation of the waste streams' treatment options. If liquid waste samples do not meet the WAC or LDRs, the liquid will be passed through the treatment stream to meet LDRs and WAC, stabilized, and ultimately placed in the ICDF landfill.
9	Table 6	page 17	This is an informative table. However, it is not clear based on the information provided in this table as to what happens to the supernatant water (9,887 gallons as cited in Table 4) found in V-tanks 1-3. After a careful reading of the "Storage Area" and "Management Information" columns, it would appear that we are concerned with handling and storing only those liquids separated from the V-tanks sludge, and there is no acknowledgement of the supernatant liquids that would have been drawn off prior to sludge removal. Please explain, and change the table if necessary	Supernatant water will only be withdrawn from the V-3 tank. Supernatant water will remain on the AOC to be used for slurry, treated to meet LDRs and WAC, then stabilized. A footnote will be added to Table 4 to explain the fate of the supernatant liquids.

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10	Section 4.3.5.1,	page 17	This section is not inclusive of a discussion for the destination or fate of the supernatant V-tank liquids, as discussed in the previous comment. Please add this discussion.	The following text will be added to Section 4.3.5.1. It will be placed before the last paragraph. The following steps will be performed to remove the liquid and sludge contents from the V-Tanks within the AOC. Step 1. 5,000 gallons of V-3 Liquid supernatant will be removed to the Liquid Separation/Sludge De-watering process and treated through the Liquid Treatment with Ion Exchange and then transferred into water HICs. These water HICs will then be transferred to the HIC Storage/Drum Filling, Staging Area. This water may be used in sludge slurry process of each the v-tanks if needed and will ultimately be sampled and solidified in the HIC Storage/Drum Filling, and Staging Area at the end of the process prior to transfer to the disposal facility. If sampling indicates additional treatment is necessary, water will be treated in a back-up liquid treatment system. Step 2. Pump the sludge from each of the V-1, V-2, and V-3 tanks through the Liquid Separation/Sludge De-watering process. The de-watered sludge will go into the HIC Storage/Drum Filling, and Staging Area where the sludge will be transferred into drums prior to transfer to the Interim Sludge Storage Facility. The water from the de-watering process will also be treated in the Liquid Treatment with Ion Exchange System and then transferred into water HICs. These HICs will be sampled and then solidified in the HIC Storage/Drum Filling and Staging Area prior to transfer to the disposal facility. If sampling indicates additional treatment is necessary, water will be treated in a back-up liquid treatment system. Step 3. Remove remaining liquid phase from each of the tanks. This water will also pass through the Liquid Separation/Sludge De-watering process and the Liquid Treatment with Ion Exchange and collected in water HICs. The HICs will be transferred to the Drum Storage/Water Storage Decontamination Area, sampled and then solidified prior to disposal. If sampling indicates additional treatment is necessary, water will be treated in a back-up liquid treatment system.

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11	Section 4.3.5.2	pages 17-19	a) For the HIC Storage/Drum Filling and Staging Area, the discussion in this section revolves around the sludge removal from the V-tanks, and subsequent liquid separation. However, there is again no discussion of the fate of the supernatant liquids. This site is supposedly the destination for these liquids (see Figure 4).	The figure will be revised to show the liquid – after treatment to meet the LDRs and WAC – will be stabilized and disposed at the ICDF or other appropriate TSDF. A new box will be added to describe the liquid waste stream after storage in the Drum Storage/Water Storage/Decontamination Area.
12	Figure 4 and Section 4.3.5.3	pp. 18, 19	a) This section and Figure 4 discuss and illustrate the fate of three waste streams that arrive at the "Drum Storage/Water Storage /Decontamination Area" from the drum staging area. The section also discusses the decontamination of large equipment. However, (refer to Figure 4, yellow boxes) apparently the "MLLW Water (Supernatant)", "MLLW, HW, or TSCA Storm Water", the "MLLW Tank and Piping Excavation and Removal Debris", and the "Sand filter contents/ concrete structure & sand filter", all shown on Figure 4 to have as their destination the Drum Storage Area, are missing a discussion of their fate. Please add this discussion. b) In Figure 4, all the AOC components (the second through fourth yellow boxes) that have as their destination the "Drum Storage/Water Storage Decontamination Area" probably do not have as their destination the ISSF. That facility is only for the dewatered sludges. Please discuss the fate of the AOC components cited here.	Figure 4 has been clarified: the ISSF will accept dewatered sludge and sand filter contents. Text will be added to the ISSF (Sludge) box to read, " ISSF (Sludge) & Sand Filter Contents." Water and miscellaneous waste from the decontamination procedures and the dewatering process will be treated to meet LDRs, stabilized, and disposed at the ICDF landfill or appropriate TSDF. Figure 4 will be modified to include a line coming out of the Drum Storage/ Water Storage Decontamination Area that will go down and to the right that will lead into the ICDF / Envirocare (or appropriate facility). This line will have an additional box that will read "Liquid & Misc. Waste."

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13	Figures 5, 6	pages 20 and 21	a) Neither figure indicates the fate of the MLLW Water (Supernatant). b) In Figure 6, in the "Decontamination Area Activities" large tan box, there is the blue box stating "Equipment to be cleaned and reused" which implies decontamination, probably with water and hence the creation of a waste stream. Please discuss the fate of these liquids.	Figures 5 and 6 will be clarified to identify the fate of the supernatant MLLW water. Figure 5 will show "contents removed from V-tanks" as the waste stream entering the area. Figure 6 will show that liquid from the decontamination process will be collected in sumps and decontamination pads. This waste stream will ultimately be treated to meet LDRs if necessary, and will be disposed at ICDF complex or an appropriate offsite TSDF.
14	Section 4.3.5.4 and Figures 4 and 7	page 22 pages 18 and 23	This section and the associated Figure 7 discuss and show, respectively, the fate of the tanks debris and associated piping debris (lowermost yellow boxes). However, figure 4 does not associate these same debris categories with the "Soil Bag/Debris/Tank Storage Area" but rather represents their (the MLLW Tank & Piping Excavation and Removal debris) fate as the "Drum Storage/Water Storage Decon Area". Please explain the apparent discrepancy.	Figure 4 will be corrected. Figure 7 shows the correct destination for the debris.
15	Section 4.3.5.6,	page 24, last bullet	Please add to the first sentence "..., and then transported to the Drum Storage/Water Storage Decontamination Area."	Noted and accepted. The sentence will be revised to identify the full management strategy for shielded overpack entering the ISSF.

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16	Appendix A		The "CERCLA Waste Storage Area Checklist" should be finalized now rather than cited as a "sample". A statement can be included to say that this is the form we will use unless all parties agree to a modification. Otherwise, the checklist, which appears comprehensive, could be altered in the future or shortened without agency agreement.	Inspections of CERCLA waste storage areas are conducted in accordance with all applicable and relevant requirements. The CERCLA waste management checklist is not a final document because it may be necessary to modify the checklist in order to incorporate or delete requirements based on the wastes to be managed and the areas they are managed. This sample checklist may in fact be used as presented to perform inspections of existing CERCAL waste and waste to be generated from TAN V-Tank associated activities and when it is used it will be finalized and approved through the existing BBWI review and approval process for such documents. However, the flexibility to revise the checklist without being out of compliance with the checklist in this WMP is needed. Therefore, the authors decline to finalize the checklist – it will remain a sample or draft.